National Knowledge Network (NKN)

April 7, 2021

About National Knowledge Network

- NKN is a state-of-the-art Pan-India network and is a revolutionary step towards creating a knowledge society without boundaries.
- The Government's decision to set up the National Knowledge Network was announced in the Budget Speech, 2008-09.
- A High Level Committee (HLC) was set up under the Chairmanship of Principal Scientific Adviser to the Government of India to coordinate and monitor the establishment of the National Knowledge Network.
- Government has approved the project on Establishment of National Knowledge Network in March, 2010
- National Informatics Centre (NIC) is the implementing agency of NKK
- It facilitates advanced distance education in specialized fields like engineering, science, medicine etc. as well as enable an ultra-high speed eGovernance backbone.
- It bridges the existing knowledge gap in the country and helps the country evolve as a Knowledge Society and also spur economic activities in the Knowledge domain.
- It is the national research and education network, whose purpose is to provide a unified high speed network backbone for educational institutions in India
- The network is designed to support Overlay Networks, Dedicated Networks, and Virtual Networks
- The entire network seamlessly integrate with the global scientific community at multiple gigabits per second speed
- By facilitating the flow of information and knowledge,

the network addresses the critical issue of access and creates a new paradigm of collaboration to enrich the research efforts in the country.

- The network design is based on a proactive approach that takes into account the future requirements and new possibilities that this infrastructure may unfold, both in terms of usage and perceived benefits.
- NKN is intended to connect all the knowledge and research institutions in the country using high bandwidth / low latency networks.
- NKN is designed to provide high availability, Quality of Service, security and reliability.
- The purpose of NKN goes to the very core of the country's quest for building quality institutions with requisite research facilities and to create a pool of highly trained professionals.
- The participating institutions at the edge would seamlessly connect to NKN at gigabit speed. NKN shall be a critical information infrastructure for India to evolve as a knowledge society.
- Currently, NKN inter connects about 1700 major Research and Educational Institutes in India, thereby providing a powerful platform to close to five crore students, researchers, academicians and government officers.

Objectives of NKK

To interconnect all institutions of higher learning and research with a high speed data communication network to facilitate knowledge sharing and collaborative research.

Role of NKN:

- Establishing a high-speed backbone connectivity which will enable knowledge and information sharing amongst NKN connected institutes
- Enabling collaborative research, development and innovation amongst NKN connected institutes

- Facilitating advanced distance education in specialized fields like engineering, science, medicine etc.
- Facilitating an ultra-high speed e-governance backbone
- Facilitating connection between different sectoral networks in the field of research
- Link to Global Networks to collaborate with the research communities across the globe

Application areas of NKK

The application areas envisaged under the National Knowledge Network cover

- Agriculture
- Education
- Health
- e-governance
- Grid Computing (High Performance Computing)
- The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN